Attorney Docket No. A-10274

Applicant : OPPER, Reinhold

Serial No.: 10/526,458 Filed: September 1, 2003

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AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

- 1. (currently amended) Fastening element (1) having a hollow shank (27) comprising a sethead (4) at a free end, having a deformation segment (2) to form a closure head, and having a connecting segment (28) inside the shank (27) forming a tension-resistant connection to a foot (24) of a mandrel (7) inside the shank and having a mandrel head (23), the mandrel head being separated -spaced from the sethead (4) of the shank (27) by an empty space, a shank end (3) opposed to the sethead (4) being provided with a punch edge (6) extending along an outermost periphery of the shank (27) and formed by a peripheral surface (26) and a face (25) of the shank end (3), and a blumt projection being provided centrally of the face (25) protruding from a plane in which the punch edge (6) lies, in a direction away from the sethead (4), wherein the height of the projection measured from a plane in which the punch edge lies is 2.5% to 5% of the diameter, or mean diameter, of the punch edge.
- (currently amended) Fastening element (1) having a hollow shank (27) comprising a sethead (4) at a free end, having a deformation segment (2) to form a closure head, having a mandrel (7) inside the shank (27), comprising a mandrel head (23) spaced from the sethead (4) and a mandrel foot (24), the mandrel foot (24) being tension-

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resistantly connected to a shank end (3) opposed to the sethead (4), the shank end (3) comprising a punch edge (6) extending along an outermost periphery of the shank (27) and formed by a peripheral surface (26) and a face (25) of the shank end (3), and a blunt projection being provided centrally of the face (25), protruding from the plane in which the punch edge (6) lies, in a direction away from the sethead (4) wherein the height of the projection measured from a plane in which the punch edge lies is 2.5% to 5% of the diameter, or mean diameter, of the punch edge.

- (previously presented) Fastening element according to claim 1,
 characterized in that the shank end (3) opposed to the sethead (4) is open and the
 projection is arranged at the foot (24) of the mandrel.
- (withdrawn) Fastening element according to claim 1, characterized in that
 the shank end (3) opposed to the sethead (4) is closed and forms the projection with a
 bottom (35).
 - 5. 6 (canceled).
- (withdrawn) Fastening element (1) according to claim 1, characterized in that the projection is offset from the face by a step.
- 8. (previously presented) Fastening element (1) according to claim 1, characterized in that the face (25) passes smoothly from the punch edge (6) into the

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projection, and the height of the projection measured from a plane in which the punch edge lies is a fraction of the diameter, or mean diameter, of the punch edge.

(canceled).

- 10. (previously presented) Fastening element (1) according to claim 1, characterized in that the face (25, 32) has a shape conforming to a conical or pyramidal surface tapering down in a punching direction.
- (previously presented) Fastening element (1) according to claim 1, characterized in that the cross-section of the fastening element (1) is substantially circular.
- 12. (previously presented) Fastening element (1) according to claim 1, characterized in that the peripheral surface (26) is a right circular cylindrical surface and the face (25) and the peripheral surface (26) make an included angle of 93° to 96° with each other.
- 13. (previously presented) Fastening element (1) according to claim 1, characterized in that a cross-section of the fastening element (1) is substantially polygonal.

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 (previously presented) Fastening element (1) according to claim 1, characterized in that the mandrel head (23) is widened.

- 15. (previously presented) Fastening element (1) according to claim 1, characterized in that the shank end (3) or the mandrel foot (24), at least in the region of the punch edge (6), is hardened to make it stronger.
- 16. (previously presented) Fastening element according to claim 2, characterized in that the shank end (3) opposed to the sethead (4) is open and the projection is arranged at the foot (24) of the mandrel.
- 17. (withdrawn) Fastening element according to claim 2, characterized in that the shank end (3) opposed to the sethead (4) is closed and forms the projection with a bottom (35).
- 18. (previously presented) Fastening element according to claim 2, characterized in that, inside the shank (27), a connecting segment (28) forms a tension-resistant connection with the foot (24) of the mandrel (7).
- 19. (withdrawn) Fastening element (1) according to claim 2, characterized in that the projection (33) is offset from the face by a step.

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20. (previously presented) Fastening element (1) according to claim 2, characterized in that the face (25) passes smoothly from the punch edge (6) into the projection, and the height of the projection measured from a plane in which the punch

edge lies is a fraction of the diameter, or mean diameter, of the punch edge.

21. (canceled).

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- 22. (previously presented) Fastening element (1) according to claim 2, characterized in that the face (25, 32) has a shape conforming to a conical or pyramidal surface tapering down in a punching direction.
- 23. (previously presented) Fastening element (1) according to claim 2, characterized in that the cross-section of the fastening element (1) is substantially circular.
- 24. (previously presented) Fastening element (1) according to claim 2, characterized in that the peripheral surface (26) is a right circular cylindrical surface and the face (25) and the peripheral surface (26) make an included angle of 93° to 96° with each other.

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- 25. (previously presented) Fastening element (1) according to claim 2, characterized in that a cross-section of the fastening element (1) is substantially polygonal.
- (previously presented) Fastening element (1) according to claim 2, characterized in that the mandrel head (23) is widened.
- 27. (previously presented) Fastening element (1) according to claim 2, characterized in that the shank end (3) or the mandrel foot (24), at least in the region of the punch edge (6), is hardened to make it stronger.
 - 28. 36. (cancelled).
 - 37. (new): A fastening element comprising:

a shank comprising a shank end which includes threads and a punch edge, wherein the punch edge extends along a periphery of the shank; and

a mandrel disposed within the shank;

wherein the mandrel comprises a head and a foot end;

wherein the foot end comprises threads engaged with the threads of the shank;

wherein the foot end further comprises a projection extending from the punch

edge; and

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wherein the punch edge forms an angle of between 93 and 96 degrees with a longitudinal axis of the shank.

- 38. (new): The fastening element according to claim 37, wherein the projection extends from the punch edge by a height of 2.5% to 5% of the diameter of the punch edge.
- 39. (new): The fastening element according to claim 37, wherein the shank further comprises a set head and there is an empty space between the set head and the head of the mandrel.
- (new): The fastening element according to claim 37, wherein the shank further comprises a set head spaced from the head of the mandrel;

wherein the shank further comprises a deformation segment between the set head and the foot end; and

wherein the head is spaced farther from the set head after the deformation segment is deformed than before the deformation segment is deformed.

41. (new): The fastening element according to claim 40, wherein the deformation segment is a substantially straight wall of the shank before the deformation segment is deformed.

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42. (new): The fastening element according to claim 37, wherein the

projection forms an angle of between 93 and 96 degrees with the longitudinal axis of the shank.